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ABSTRACT

An experimental program designed to develop oral language (English) was started in the San Antonio Independent School District in 1964 and included 28 first grade classrooms of culturally deprived urban Spanish-speaking children. Classrooms were designated as Oral-Aural English, with intensive English one hour daily; Oral-Aural Spanish, with intensive Spanish one hour daily; and Non Oral Aural (which was merged with O-AE and O-AS after two years. Ott's study, 1967, showed superior gains made by the experimental groups in the first grade, but these findings were not predictive of continued superiority through the intermediate grades. The author's study (her doctoral dissertation, University of Texas at Austin, January 1969, of which the present paper is an abstract) was designed to analyze the cumulative effects of instruction on children receiving continuous treatment over a period of years. Conclusions remain unexplained as to why the scores of children receiving Spanish treatment excelled the other treatment groups when the criterion was English proficiency. A possible reason is that hearing one's own language amplifies the phonemic and syntactical contrasts between English and Spanish, thus making it easire for Spanish speakers to learn English. (AMM)

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ENGLISH LANGUAGE PROFICIENCY FOR FOURTH AND FIFTH GRADE SPANISH-SPEAKING CHILDREN

by

Thomasine Taylor

The failures and alleged retardation of Spanish-speaking children in the southwest (Lamanna and Samora, 1967) has evoked widespread concern. Many research and experimental projects throughout the southwest are attempting to correct this deficiency in public school programs. The unifying thread in these efforts to alleviate problems of the linguistically different child is a concentration on oral language development.

One such experimental program designed to develop oral language started in 1964 in the San Antonio Independent School District. The project included 28 first grade classrooms of culturally deprived urban Spanish-speaking children.

The 28 classrooms were arbitrarily assigned to one of three treatments: (1) nine classrooms were designated as

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Oral-Aural English (OAE) and were given intensive oral-aural language training in English for one hour a day using culture fair science materials as the vehicle of instruction. The remaining part of the school day was conducted in the traditional manner using only English; (2) ten classrooms were designated as Oral-Aural Spanish (OAS) which provided intensive oral-aural language training in Spanish for one hour a day using the same science content as OAE; (3) nine classrooms were designated as Non Oral Aural (NOA) which involved no special oral-aural training, but which used the same science content provided for the experimental groups.

It was decided after two years to eliminate the NOA experimental group and to merge those students into OAE and OAS groups. Thus two experimental groups continued with the oral-aural language development programs using the science-based content. The two groups were renamed so that those receiving intensive English instruction were called Language Cognition English (LCE) and those receiving intensive Spanish instruction were called Language Cognition Spanish (LCS).

Background of the Problem

The original purpose of the project was to

determine the effects of an intensive oral language program on reading readiness in first grades (Horn, 1966). A study, which evaluated the impact of such instruction on English language proficiency for Spanish-speaking school beginners (Ott, 1967), showed that superior gains were made by the experimental groups when compared to a control group using the traditional curriculum procedures.

While these findings were significant at first grade, they were not predictive of continued superiority through the intermediate grades. A study, designed to analyze the cumulative effects of instruction on children receiving continuous treatment over a period of years, was made in January 1969.

Educational goals cannot be set unless the status of the English language competence of Spanish-speaking children can be established. The lack of suitable devices by which oral language can be measured necessitated the development of a new instrument. The oral language test used in the study is only a gross measure of language competence, nevertheless, the test discriminated between the subjects on the dimensions of language selected for evaluation.

The San Antonio Project had only a few remaining students who had received continuously the oral-aural treatment using the science materials in two treatment forms, LCE and LCS. The expected transfer of training from highly structured language teaching materials to proficiency in

language in general appears to be of importance for the population concerned.

Purpose of the Study

This study sought to (1) determine if the students participating in the San Antonio Independent School District project for four and five years appear to have significantly benefited in language development from the two experimental treatments, i.e., LCE and LCS, when compared to a control group composed of fourth and fifth grade children receiving no special language treatment; (2) develop an instrument by which a measure of the quality and quantity of productive language Spanish-speaking children have attained at the intermediate grade levels.

Hypotheses

The design of the study resulted in three major null hypotheses: (1) there will be no significant difference among the three treatment groups on oral language proficiency at the fifth grade level; (2) there will be no significant difference on oral language proficiency at the fourth grade level; (3) there is no correlation between the three subtests and total score on the instrument used.

Scores indicating I.Q.'s for the children studied were considered invalid because there are no measuring devices

which can measure I.Q. adequately for culturally deprived and linguistically different students. Sex difference was not considered relevant to the purpose of the study, as the principal aim was to measure group achievement in the production of English language. The teacher variable for the experimental groups was controlled in part by the fact that all the subjects had been exposed to different teachers each year, all of whom had had in-service training in conducting the experimental programs. The control group was selected randomly from six classrooms, thus the teacher variable in this group was controlled in part through the randomization of the students.

Description of the Sample

Experimental Groups LCE and LCS: When the original project began in the fall of 1964, there were nine schools involved. Most of the students were from families whose average yearly income was under $3,000 and whose native language was Spanish (Horn, 1966). By the beginning of the fall term of 1968 the following count comprised the number of pupils who had had continuous treatment:

	LCE	LCS
Fifth grade	34	33
Fourth grade	27	29

The Control Group: This group was selected randomly from the fourth and fifth grades in a nearby elementary school whose population was similar to that of the schools using the experimental treatments. No intensive oral language training was offered at this school.

Development of Instrument Used

In November, 1968, a commercially prepared review lesson, designated as Test 6, (Language Arts, Inc., Austin Texas) was considered for use in the study. Review of the materials disclosed that Test 6 is a culminating lesson for a set of materials designed to teach standard English to linguistically different children.

The test was composed of a film strip accompanied by a prerecorded series of modeled sentences. The pictures had been lifted from the five previous instructional film strips hopefully to include all troublesome phonemes for non-standard English speakers.

Phonology: It was discovered that the test gave the investigator a quick relative check on phonological skills of elementary school children. This instrument has 616 phonemes in the 36 sentences used, which appeared to give a comprehensive coverage of English phonemes by which a raw score of gross deviations could be attained. The task of the subject was to mimic the model as nearly as possible.

Intonation: The second component of language considered was intonation as mimicked by the subject. It was felt that either the subject repeated with acceptable intonation, indicating that he knew what he was saying or he did not. The same responses obtained for the phonology portion of the test were evaluated for intonation.

Fluency: Phonology and intonation alone were not considered sufficient to constitute a general measure of total language. For this reason a fluency section was devised. In order to keep the test materials consistent, another film strip using the same children, who had grown to eleven or twelve years old, was used. It was felt that this context would appeal to all children and the continuity maintained throughout the film strip was thought to be a valuable asset in eliciting spontaneous speech from children, as it precluded any time-consuming cognitive shifts.

It was impossible to predict with certainity whether or not the picture stimuli of the second film strip would elicit a continuous flow of spontaneous speech for the fluency portion of the test. Therefore, a pilot test was conducted and it was found that the children did, indeed, talk freely about the pictures. The pilot test included twenty frames which remained on the screen for 30 seconds each.

The oral responses were transcribed, and it was noted from the pilot test transcriptions that on the first five frames, which began a continuous story of a family's activities on Saturday, that the subjects' fluency was the same level as it was on the entire twenty. That is, if he

spoke a great deal about the first five pictures, he was still speaking at the same rate about the twentieth picture. Thus it was decided to limit the fluency section to the first five frames for economy of administration and scoring time.

Testing

When testing began on the preselected subjects, the child entered the room and was directed to the proper table and asked to sit facing the filmstrip viewer. Headphones, with a microphone attached, were placed on his head. He was asked if he were comfortable. No other remarks were addressed to the student.

The administrator then returned to the table behind the student and began the record and playback machines. As each test was being administered it was monitored by the investigator. Prompting of any kind was ruled out and no remarks were addressed to the subjects during the test. Only two students out of 161 failed to respond to the prerecorded directions.

Raw scores were computed for each dimension of language measured, then added to get a total language score. A separate series of analyses of variance was done for each grade level and a correlation analysis was performed for all students combined. The variables analyzed were the following four measures of English: (1) phonology (2) intonation (3) fluency (word count) (4) total language.

Summary of Findings

Fifth Grade: In examining the means, standard deviations and analysis of variance for the fifth grade, the mean score for the fifth grade Spanish treatment group was superior to the English and Control treatment groups on intonation, fluency and total language score. The English treatment group mean score was superior to the other groups on phonology.

Fourth Grade: The Spanish treatment group mean scores indicated a slightly superior performance on phonology, fluency and total language score. The three groups were essentially equal on intonation. The standard deviations for the phonology and intonation subtests are reasonably similar. They support the probability levels based on the statistical analysis.

Correlation Between Subscales: The null hypothesis that there was no correlation between the three subscales and total score was rejected on the basis of the statistical findings. An intercorrelation technique revealed that correlations were significant at the .01 level.

It is important to note that the fluency subtest and total language scores correlate at .96, which suggests that little information would be lost if only the one subtest were used in lieu of the total test as a measure of general language; that is, the two and one-half minute fluency test might be substituted for the 14-minute total test which would make the test more administratively practical.

Limitations of the Study

The number of subjects who had had continuous treatment for four and five years was small in comparison to the original sample of 1500. The total number of subjects for each treatment group was approximately the size of one classroom, yet they had to be sampled from six different schools because there were no remaining classrooms intact.

The scoring procedure of the phonological and intonational aspects of the test were of necessity subjective; however, the examiner scored all tests in order to reduce interexaminer differences. The scoring procedure for intonation should have been considered a dichotomous variable which would call for a different statistical treatment.

Conclusions

The fifth grade findings indicated there were no significant differences in intonation among the treatment groups and substantiates the limitation of the scoring procedure of this particular subtest. The consistently significant differences yielded by the analyses of the data support the following conclusions: (a) the Spanish treatment group is superior to both the English and Control treatment groups in fluency and total test scores; (b) the English treatment group was superior in phonology; (c) the Control group ranked third on phonology, fluency and total score.

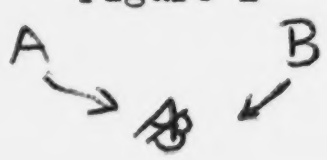
The fourth grade findings indicate there were no statistically significant findings on any variable analyzed. Though non-significant, the mean scores and standard deviations tend to lead to the belief that in the fluency and total scores the Spanish treatment was superior to the English treatment.

A Theoretical Hypothesis Based on Findings and Conclusions

Conclusions remain unexplained as to why the scores of children receiving Spanish treatment excelled the other treatment groups when the criterion was English proficiency. In an investigation on retention in reading through the summer months (Arnold, 1968) similar results were found. The group which had received continuous intensive instruction in Spanish for one hour a day throughout the school year showed significantly greater retention on an English reading vocabulary test. He offered no explanation for this phenomenon.

A possible reason is that hearing one's own language amplifies the phonemic and syntactical contrasts between English and Spanish, thus making it easier for Spanish speakers to learn English. Assume that a child who learns Spanish as a native language knows a Spanish phoneme designated as A. When he goes to school he hears only English, which is foreign to him, and an unacceptable substitute for the equivalent English phoneme designated as B emerges in his speech. He begins to speak English with a distorted sound system, which schematically is shown as

Figure 1

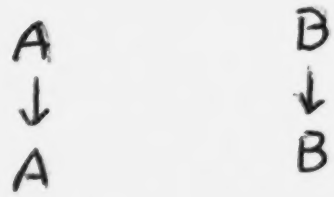


The resultant sound would be unacceptable in either language.

In, on the other hand, he receives partial instruction in standard Spanish, phonemes in his own language are reinforced and take on a distinct entity: designated as A in Figure 2.

Hearing English throughout the remainder of the day, the English equivalent emerges as well, but with an enhanced awareness of two different discrete sounds between the languages, a student's sound system may be shown as

Figure 2



The same analogy could be drawn from contrasting syntactical patterns and other features of both languages which could account for the superior performance in English proficiency by children receiving partial instruction in Spanish.

Dr. Thomas D. Horn, University of Texas, commented that this study further pointed up the critical need for adequate instruction and control of teacher variables. The apparently opposite conclusions reached by this study and those reported by Lester Knight (1969), while puzzling in some respects, indicated that treatment effects of language oriented instructional programs appeared with more significance when the criterion was an oral language test rather than reading tests. The most telling point is that language programs for linguistically different learners which do not include intensive, structured oral language instruction will result in little or no pupil imporovement toward achieving a socially unmarked style of oral language.

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